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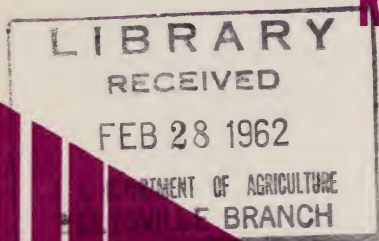
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ARS-91-10-2
February 1962

BRUCELLOSIS ERADICATION

Recommended Uniform Methods and Rules



AGRICULTURAL RESEARCH SERVICE
U. S. DEPARTMENT OF AGRICULTURE

This publication is the recommended "Uniform Methods and Rules" for establishing and maintaining:

- Modified Certified Brucellosis Areas
- Certified Brucellosis-Free Herds of Cattle
- Certified Brucellosis-Free Areas

AND

- Validated Brucellosis-Free Herds of Swine
- Validated Brucellosis-Free Areas

Amended by the United States Livestock Sanitary Association, November 2, 1961, and approved by the Agricultural Research Service, Animal Disease Eradication Division, effective December 15, 1961.

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CHAPTER I

BOVINE BRUCELLOSIS ERADICATION UNIFORM METHODS AND RULES

PART I: DEFINITIONS

"Positive" or "Reactor"

1. An official vaccinate more than thirty (30) months of age that discloses a complete agglutination reaction in the blood titer dilution of 1/200 or higher.
2. All other animals more than six (6) months of age that disclose a complete agglutination reaction in the blood titer dilution of 1/100 or higher.

"Suspect"

1. An official vaccinate more than thirty (30) months of age that discloses agglutination in the 1/100 dilution and less than complete in the 1/200 dilution.
2. All other animals more than six (6) months of age that disclose agglutination in the 1/50 dilution and less than complete agglutination in the 1/100 dilution.

"Negative"

1. An official vaccinate more than thirty (30) months of age that discloses a reaction of not more than complete agglutination in the 1/50 dilution.
2. All other animals more than six (6) months of age that disclose a reaction of less than incomplete agglutination in the 1/50 dilution.

The "Herd" Test

Shall include all cattle over eight (8) months of age except steers, spayed heifers and official vaccinates not more than thirty (30) months of age.

"Approved Brucella Vaccine"

A product that is approved by and produced under license of the United States Department of Agriculture to be used in the control of brucellosis through its injection into cattle.

"Official Vaccinate"

A bovine animal vaccinated against brucellosis with an approved Brucella vaccine while from 4 through 8 months of age, or a bovine animal of a beef breed in a range or semi-range area vaccinated against brucellosis with an approved Brucella vaccine while from 4 to 12 months of age, under the supervision of a Federal or State veterinary official, permanently identified as such a vaccinate, and reported at the time of vaccination to the appropriate State or Federal agency cooperating in the eradication of brucellosis.

Identification of Vaccinated Animals

(a) Calves tattooed "shield and V" in right ear or branded "V" on right jaw.

(b) If the tattoo is used, then the "shield and V" shall be preceded by a numeral indicating the quarter of the year in which the vaccination was done. The "shield and V" shall be followed by the last digit of the year in which the vaccination was done.

(c) If the brand is used, then the "V" shall be applied in four different positions--one each year over a four-year period to indicate in which year the vaccination was done. The fifth year will repeat the first year,

and so on indefinitely. In 1962 the "V" shall be placed with the open end facing upward and so on clockwise indefinitely.

"Range Area"

An area in which all cattle are maintained on natural forage and/or browse during the entire calendar year.

"Semi-range Area"

An area in which all cattle are maintained on natural forage and/or browse during the entire calendar year with occasional supplemental feeding.

Exception: When in the judgment of the State and Federal Livestock Sanitary Authority local factors prevail which are not conducive to the eradication of brucellosis, such areas need not be classed as range or semi-range.

"Immediate Slaughter"

The delivery of animals to the slaughtering establishment within a ten (10) day period from the date the animals were either consigned for slaughter or permit issued for their consignment to slaughter. Such animals, upon delivery to the slaughtering establishment, shall be slaughtered as soon as practicable.

PART II. RECOMMENDED PROCEDURES

Section I. Individual Herd Plans

Plan A. Testing of cattle, permanent identification, and prompt disposal of positives, for slaughter only, with or without vaccination of calves. Herds that have passed three successive satisfactory milk ring tests at intervals of not less than four (4) nor more than six (6) months, may be considered as having met the brucellosis requirements of Plan A for Grade A milk production.

Plan B. Testing of cattle, permanent identification, and temporary retention of positives pending their disposal for slaughter, with vaccination of calves. Positives may be retained in a quarantined herd for a period not to exceed three years from the date retention of positives was started. All Plan B herds should be retested at least every six months.

Plan C. Calf vaccination without test of any part of the herd. This plan is to be confined to those herds in which the movement of animals is restricted by special permits issued by the State Livestock Sanitary Authority.

Section II. Participation on Area Basis

A. When 75 percent or more of the cattle owners representing at least 51 percent of the cattle in an area have placed their cattle under any one or a combination of the three plans, then the remaining owners shall select a herd plan. The period under which individual herd plans are in effect on an area basis should not exceed three years, at which time the area is obligated to adopt the Modified Certified Brucellosis Area plan.

B. When an area has been designated as working toward Modified Certified Brucellosis Area status, as a result of petitioning or other legal procedure, all herds and cattle shall be placed under the provisions of the Modified Certified Brucellosis Area plan as outlined in PART IV.

C. When at least 90 percent of the counties representing a majority of the cattle in the State have been legally designated as working toward Modified Certified Brucellosis Area status, the remaining herds and cattle in the State shall be placed under the Modified Certified Brucellosis Area plan.

Section III. Supervision

The official brucellosis eradication programs shall be supervised by full-time employed State and/or Federal veterinarians.

Section IV. Entering Premises

Persons engaged in the brucellosis project should be authorized to enter premises to carry out eradication procedures.

Section V. Services to Owner

Services to owner should be made available without expense to him so long as funds for such purposes are available (owner to provide for handling of his cattle). Provision should be made if possible to pay practicing veterinarians for brucellosis eradication services on a per head or on a per head and per farm basis.

Section VI. Classification of Animals

The following tables shall be used in classifying the blood titers of tested animals:

Official Vaccinates				All Others			
1/50	1/100	1/200		1/50	1/100	1/200	
-	-	-	Negative	-	-	-	Negative
1	-	-	Negative	1	-	-	Suspect
+	-	-	Negative	+	-	-	Suspect
+	I	-	Suspect	+	I	-	Suspect
+	+	-	Suspect	+	+	-	Positive
+	+	I	Suspect	+	+	I	Positive
+	+	+	Positive	+	+	+	Positive

Section VII. Branding Positives

A permanent brand with the letter "B" (at least 2x2 inches) must be placed on the left jaw of all cattle classed positive. Positives must remain on premises where disclosed until a State or Federal permit has been obtained for movement to immediate slaughter where State approved and/or Federal inspection is maintained.

Section VIII. Reports

All activities, conducted either privately or as part of the official program such as results of agglutination tests and vaccination, must be reported promptly to State and Federal cooperating agencies.

PART III: INDIVIDUAL CERTIFIED HERD PLAN

A herd may be placed under supervision for certification as brucellosis-free upon complying with provisions governing the testing requirements of the respective State-Federal Cooperative Program.

Section I. Herd Certification

A. Herd blood tests shall be made at intervals of not more than sixty (60) days until all evidence of infection has been eliminated. A herd may be certified as brucellosis-free when it has passed at least two consecutive negative blood tests, with the first clean test and the certifying test not less than twelve (12) months nor more than eighteen (18) months apart. Additional herd tests may be conducted on herds if the owner so desires, or if the certifying agency deems it advisable.

B. If there is no evidence of infection on the first blood test, a herd may be certified as brucellosis-free when it has passed one additional negative test conducted not earlier

than six (6) months nor more than eighteen (18) months from the date of the first test.

C. Where the Milk Ring Test is employed, herds may be initially certified as brucellosis-free with a minimum of three satisfactory milk tests conducted at not less than ninety (90) day intervals and followed by a negative herd blood test conducted within ninety (90) days after the last negative milk ring test. Herds in which infection has been disclosed shall be tested in accordance with provisions of paragraph A of this section.

Section II. Herd Recertification

A. Upon evidence of a negative herd blood test at the end of one year, certification of that herd may be extended for one year.

B. If the retest of a certified herd or of animals from such a herd reveals one reactor, the herd may be recertified on the result of a negative herd retest conducted not earlier than sixty (60) days following removal of the reactor. Intervening blood tests, if any, must be negative.

C. If the retest of a certified herd or of animals from such a herd reveals more than one reactor, the herd must re-qualify for certification as under Section I, A.

D. If the retest of a certified herd discloses suspects but no positives, only the suspicious animals need be retested. If all suspects are available for retest and are negative, the herd test may then be considered negative. If the retest does not include all suspicious animals, or if one or more positives results, the herd shall be retested as provided in Section II, B or C. If only one suspect was not available for retesting and if that suspect had been an official vaccinate, the herd test shall be considered negative and the herd recertified.

Section III. General Provisions

A. Vaccination Titers. Official vaccinates under thirty (30) months of age are not required to be tested, or if tested, are not required to be negative. Official vaccinates over thirty (30) months of age, classed suspect, may be retained in certified herds for retesting until their final determination is made.

B. Additions to certified herds or herds with negative tests shall be limited to the following:

1. To certified herds:
 - a. Natural herd increase.
 - b. From herds with equal status.
 - c. From herds that have passed a negative blood test within the past twelve (12) months:
 - (1) Official vaccinates under thirty (30) months of age on certificate of vaccination--over thirty (30) months of age if negative within thirty (30) days prior to addition.
 - (2) Non-vaccinated animals on evidence of negative retest not less than sixty (60) days from date of negative herd test.
2. To herds that have passed a negative blood test within the past twelve (12) months:
 - a. Natural herd increase.
 - b. From herds with equal or superior status.
 - c. From other herds:
 - (1) Official vaccinates under (30) months of age on certificate of vaccination--over thirty (30) months of age if negative within thirty (30) days prior to addition.

- (2) Non-vaccinated animals if tested negative within thirty (30) days prior to addition, then segregated and retested negative in not less than sixty (60) days from date of first test.

C. Additions from herds without equal status. Under qualifying conditions of Subsections 1. c. and 2. c. of paragraph B such animals shall not receive new herd status for sale purposes until they have been members at least thirty (30) days and included in a complete herd retest.

D. Certificates. Certified brucellosis-free herd certificates which shall be valid for one year unless revoked, may be issued by cooperating State or Federal officials.

E. Quarantine. The entire herd must be confined to the premises if reactors are disclosed by the blood test. Movement of all cattle shall be prohibited until the herd has passed a negative herd retest at least thirty (30) days following removal of reactors, except cattle consigned for immediate slaughter under permit.

F. Cleaning and disinfection. Premises shall be cleaned and disinfected under regulatory supervision within fifteen (15) days following removal of reactors, unless an extension of time is granted.

PART IV: MODIFIED CERTIFIED AREA PLAN

The provisions of the individual certified herd plan that relate to testing, cleaning, quarantining and disinfecting shall apply to the Modified Certified Brucellosis Area plan. The extent of the area shall be determined by the cooperating State and Federal agencies. All tests for area certification shall be performed within an eighteen (18) month period. When an area has been legally designated as working toward Modified Certified Brucellosis Area status, the following rules shall apply:

Section I. Area Certification

A. If as the result of a blood test of all cattle within an area the number of positives does not exceed one percent and the herd infection does not exceed five percent, the area may be declared a Modified Certified Brucellosis Area for a period of three (3) years. Infected herds shall be quarantined until they have passed one negative blood test at least thirty (30) days following removal of the cattle classed positive except cattle consigned for immediate slaughter under permit.

B. An area may be declared a Modified Certified Brucellosis Area by the application of two milk ring tests not less than six months apart, together with a blood test of all milk reacting herds, such other herds as are not included in the milk test, and herds in which the BRT does not represent a majority of the cattle in the herd. The number of positives must not exceed one percent of the cattle and the herd infection rate must not exceed five percent. Infected herds shall be quarantined until they have passed one negative blood test at least thirty (30) days following removal of the cattle classed positive, except cattle consigned for immediate slaughter under permit.

C. (1) Range and semi-range areas may qualify as Modified Certified Brucellosis Areas for a period of three years if as the result of a blood test of all dairy cattle, all pure-bred cattle, and not less than 20 percent of the range and semi-range cows over three years of age in each herd, the number of positive does not exceed one percent of the area cattle population (excluding steers and spayed heifers) and five percent of the herds. Two or more semi-annual milk ring tests with blood tests of suspicious herds may be substituted for blood tests of individual dairy herds.

(2) Should evidence of infection be disclosed in any of the animals required to be tested in the range or semi-range herds under provisions of PART IV, Section I, C. (1), such herds shall be quarantined until (a) the entire herd has passed one negative blood test at least thirty (30) days following removal of the cattle classed positive, except cattle

consigned for immediate slaughter under permit, or (b) all cattle eligible for test that are sold or removed from the herd have been tested and no reactors are found following the removal of all cattle classed positive, provided a sufficient number of cattle have been tested to conform with ARS graph CA 4-4, page 24, and provided further, that all replacement heifer calves have been officially vaccinated during the quarantine period. Those herds which do not have consecutive negative blood tests on sufficient cattle to equal the minimum sample size during the four-year period immediately following removal of the reactors will be handled in accordance with the provisions of C (2) (a).

D. An area may be declared a Modified Certified Brucellosis Area under combined market cattle testing and milk ring testing programs provided each herd within the area qualifies according to one of the four methods listed below and provided vaccination of replacement heifer calves is practiced at a level determined by State and Federal regulatory officials in consultation with cattle owners in the area involved. Herds in which reactors are found shall be quarantined until they have passed one negative complete herd blood test at least thirty (30) days following removal of the cattle classed positive, except cattle consigned for immediate slaughter under permit. In the last test of all herds blood tested, the number of reactors shall not exceed one percent of the area cattle population and the number of infected herds shall not exceed five percent.

Methods of Herd Qualification:

1. Brucellosis milk ring tests shall be conducted on dairy herds in the area over a three-year period, with follow-up blood tests of suspicious herds. Each negative herd qualifying under this paragraph must be included in at least two consecutive semi-annual milk ring tests during the third year.

2. Blood tests of breeding cattle over three years of age, and those less than three years of age which are parturient or post-parturient, which are consigned to market or sale for any

purpose. Each negative herd qualifying under this paragraph shall have been enrolled in this program for at least 18 months and the number of animals tested shall be at least 15 percent of the animals over 3 years of age. Tests may be accomplished at farm or ranch premises, concentration points, sales yards, packing plants or elsewhere. Herds of origin of market cattle reactors disclosed within 15 days after leaving the premises of origin shall have had a complete herd blood test prior to the date certification of the area is requested, or qualify by the following subparagraph.

3. A blood test of a representative sample group of the breeding cows over 3 years of age in each herd, the sample to contain enough animals to provide a 95 percent probability of finding brucellosis, if present, at the 2 percent level of disease incidence among the animals tested. (See Graph CA 4-4, page 24, to determine sample size for each herd.) The blood test is to be conducted within 18 months prior to the date area certification is requested.

4. A complete herd blood test conducted within 18 months prior to the date area certification is requested.

E. If testing as outlined under Part IV, Section I, Paragraphs A, B, or C reveals an animal infection rate of more than one percent but not over two percent, and/or a herd infection rate of more than five percent, and an initial retest of a sufficient number of the infected herds applied not less than thirty (30) nor more than one hundred twenty (120) days following removal of the cattle classed positive reduces infection rates to not more than one percent animal infection and not over five percent herd infection, the area may then be certified. All infected herds shall be quarantined until the entire herd has passed one negative blood test at least thirty (30) days following removal of the cattle classed positive, except cattle consigned for immediate slaughter under permit.

F. If the test of an area as outlined under PART IV, Section I, Paragraphs A, B, or C results in more than two percent positives, or if an initial retest of infected herds as under Section I, Paragraph E, does not qualify the area for certification, it shall be necessary to make a complete area retest in accordance with Paragraphs A, B, C, or D of this Section.

G. Bulls and female cattle being held under quarantine for feeding purposes, separate and apart from dairy or breeding cattle, may be exempted from test provided such cattle are sold for immediate slaughter under permit from the appropriate Livestock Sanitary official at the end of the feeding period.

Section II. Area Recertification

A. At the expiration of the three-year period areas certified under the provision of PART IV, Section I, Paragraphs A or B, may be recertified for another three-year period. To do so, the results of a test of all herds in which infection was reported at the time of the previous certifying test or since, together with the results of a test of at least 20 percent of other representative herds, must reflect a rate of infection which does not exceed one percent of the cattle and five percent of the herds. The number of herds required for retest shall be computed from the last area test and shall not include the same herds previously tested for this same purpose.

B. Areas certified under the provisions of PART IV, Section I, Paragraphs A or B, may be continued as certified with the application of semi-annual milk ring tests, follow-up blood tests of milk suspicious herds, and blood tests at three-year intervals on at least 20 percent of all herds not included in the milk test and herds in which the BRT does not represent a majority of the cattle in the herds, or a screen test of beef-type herds in accordance with ADE Division Memorandum No. 504.21, as amended (See Graph CA 4-4) if the incidence of infection does not exceed one percent of the cattle, and five percent of the herds. The herds tested to meet the 20 percent requirement shall not include the same herds previously tested for this purpose.

C. (1) At the expiration of the three-year period, range and semi-range areas may be certified for another three-year period when at least 20 percent of the herds, including animals as outlined under Part IV, Section I, C (1) have been retested and the animal infection rate does not exceed one percent in not more than five percent of the herds. The number of herds required for retest shall be computed from the last area test and shall not include the same group previously tested for this same purpose.

(2) Modified Certified Brucellosis Range or Semi-range Areas may be maintained in a certified status for additional periods of three years, provided:

- (a) That at least 80 percent of the heifer calves retained in the area annually are officially vaccinated; providing that vaccination is not mandatory in strictly range areas where winter feeding is not practiced.
- (b) That during each year at least five (5) percent of the breeding cows in the area, as determined by the statistics of the Agricultural Marketing Service, or a total of fifteen (15) percent during a three-year period, are subjected to the agglutination test for brucellosis; the blood samples to be taken from animals at farms, ranches, sale yards, or slaughtering establishments.
- (c) That herds in which the existence of brucellosis has been established by market cattle testing are blood tested and handled according to the provisions of Part IV, Section I, C (2).
- (d) That dairy herds in the area are screened semiannually by the milk ring test, with blood test of herds suspicious to the milk ring test, or are blood tested.
- (e) That purebred beef herds are blood tested or that during the certification period at least 15 percent of the breeding cows in the herd are subjected to the agglutination test for brucellosis; the blood samples to be taken from market cows at ranches, sale yards, or slaughtering establishments. If less than 15 percent of the breeding cows in the herd have been tested among the market cows, sufficient additional cows may be tested within the herd to bring the total to at least 20 percent of the breeding cows over three years of age.
- (f) If testing accomplished under paragraph C (2) (b) is not sufficient to qualify the area for recertification, the area may be recertified by blood testing 20 percent of the herds in the area that are not represented in tests under paragraphs C (2) (b), (d), or (e). In lieu of a complete blood test, a screen test may be conducted on such herds in accordance with Paragraph B of this Section. The herds tested shall not include the same group previously tested for this same purpose.

- (g) That the percentage of infection disclosed as a result of such tests as conducted under the provisions of the above four paragraphs does not exceed five percent of the herds, and one percent of the area cattle population over six months of age (excluding steers and spayed heifers); the number of reactors used in computing the percentage to be the number accumulated over the three-year period.

D. If testing as outlined under Part IV, Section II, A,B,C (1) or C (2) reveals an animal infection rate of more than one percent but not over two percent, and/or a herd infection rate of more than five percent, and an initial retest of a sufficient number of the infected herds applied not less than thirty (30) nor more than one hundred twenty (120) days following removal of the cattle classed as positive reduces infection rates to not more than one percent animal infection and not over five percent herd infection, the area may then be recertified. All infected herds shall be quarantined until the entire herd has passed a negative blood test at least thirty (30) days following removal of the cattle classed positive except cattle consigned for immediate slaughter.

E. Any area not qualifying for recertification under the provisions of Part IV, Section II shall be required to re-establish its certified status through testing procedures as outlined under Part IV, Section I.

F. Bulls and female cattle being held under quarantine for feeding purposes, separate and apart from dairy or breeding cattle, may be exempted from test provided such cattle are sold for immediate slaughter under permit from the appropriate Livestock Sanitary official at the end of the feeding period.

Section III. Additions to Modified Certified Brucellosis Areas

A. Cattle from officially Certified Brucellosis-Free Herds or Areas and cattle from negative herds in Modified Certified Brucellosis Areas may enter Modified Certified Brucellosis Areas without being retested for brucellosis. All such cattle shall be individually identified and shall be accompanied by an approved certificate of health indicating herd and animal status.

B. Cattle from herds under Federal-State supervision for the control of brucellosis may enter a Modified Certified Brucellosis Area or an area in the process of such certification when all animals in the herd were negative to the official blood agglutination test for brucellosis within 90 days of the date of entry. Individual animals to be moved must be negative to an official retest at least 30 days from the date of the previous herd test and within 30 days of entry or be official vaccinates under 30 months of age.

C. Cattle under 30 months of age officially vaccinated and coming from (a) negative herds in Modified Certified Brucellosis Areas, (b) Certified Brucellosis-Free herds or Areas, or (c) herds under Federal-State supervision which have passed a test as under paragraph B may enter a Modified Certified Brucellosis Area or an area in the process of certification without further test when individually identified by mark, brand, tattoo or other acceptable identification, and accompanied by a certificate of health approved by the proper sanitary official of the State of origin.

D. Breeding cattle not over 30 months of age, officially vaccinated, which do not qualify under paragraph C may enter a Modified Certified Brucellosis Area providing they do not show blood agglutination reactions higher than incomplete in dilution of 1/200 and the animals are maintained in quarantine until they have passed a negative retest.

E. All other male or female cattle over eight months of age, including official vaccinates over thirty (30) months of age, except steers, spayed heifers, and cattle intended for immediate slaughter, shall be required to pass a negative officially recognized blood agglutination test for brucellosis within 30 days prior to the date of entry. They shall be maintained in quarantine separate and apart from all other cattle and be retested in not less than 30 nor more than 90 days after date of entry. If retested and classed negative, they shall be released from quarantine.

PART V: CERTIFIED BRUCELLOSIS-FREE AREAS

The provisions of the individual certified herd plan that relate to quarantining, cleaning, and disinfecting shall apply to Certified Brucellosis-Free Areas. The official tube agglutination test shall be utilized in all blood serum agglutination tests conducted in relation to establishing and maintaining Certified Brucellosis-Free Areas. Animals classed reactor must be immediately marketed for slaughter in accordance with Section II, Paragraph 7, of this PART. Cattle maintained in accordance with Paragraph 11, Section I, of this PART need not meet the requirements of any other Paragraph of Section I or Section II. (Steers, spayed heifers, and calves under 8 months of age are exempt from the requirements of this Part.)

Section I. Establishing Certified Brucellosis-Free Areas

Areas may qualify as Certified Brucellosis-Free for a period of 5 years provided:

1. They are located in a State in which all areas have current Modified Certified Brucellosis Area status or Certified Brucellosis-Free Area status.
2. All herds in the area have been included in one of the following within 18 months immediately preceding the request for Certified Brucellosis-Free Area status:
 - (a) At least 3 semi-annual brucellosis milk ring test.
 - (b) The market cattle testing program, under which the equivalent of at least 5 percent of the breeding cows in the herd over 3 years of age are blood tested each year.
 - (c) A blood test of a sample group of the breeding cows over 3 years of age, the sample to contain enough animals to provide a 95 percent probability of finding brucellosis, if present, at the 2 percent level of disease incidence among the animals tested. (See Graph CA 4-4, page 24.)
 - (d) A complete herd blood test.
3. All brucellosis milk ring test suspicious herds have been blood tested.

4. Not more than 1 percent of the herds, or 1 herd, whichever is greater, shall have been found to be infected during the 18 months immediately preceding the request for Certified Brucellosis-Free Area status.
5. Not more than 0.2 percent of the cattle shall have been found to be reactors during the 18 months immediately preceding the request for Certified Brucellosis-Free Area status.
6. All suspects to the blood serum test shall:
 - (a) have been retested negative,
 - (b) have had at least 2 retests not less than 30 days apart in which it has been established that the blood serum titers are stabilized or receding,
 - (c) be a part of a herd included under 2 (a) or (b) of this Section, or
 - (d) if the suspects have been consigned to slaughter and are not available for retest, the herd shall be retested or be included under 2 (a) or (b) of this Section.
7. All herds in which brucellosis has been known to exist have been legally released from quarantine.
8. All herds in which brucellosis has been found during the latest certification period shall have been retested not less than 3 months following removal of the last reactors, or be a herd included under 2 (a) or (b) of this Section.
9. A system employing positive identification of all slaughter cows and bulls over 30 months of age, whether of beef or dairy breeds, moving in intrastate and interstate commerce, shall have been initiated in the area.

10. All herds of other species of domestic livestock in which brucellosis has been found or suspected have either been tested negative or eliminated, leaving no known foci of infection.
11. Beef-type cattle may be maintained for purposes of dry lot feeding in Certified Brucellosis-Free Areas, or in areas seeking such status, provided they are inspected on the premises where held under quarantine, and are moved to slaughter under permit at the end of the feeding period.

Section II. Maintaining Certified Brucellosis-Free Areas

A. The period of certification may be extended to 6 years provided at least 80 percent of the eligible calves retained in the area each year are officially vaccinated.

B. Certified Brucellosis-Free Areas may be recertified at the end of each period of certification provided:

1. All herds in the area are represented in one of the following:
 - (a) Brucellosis milk ring tests conducted at least semi-annually.
 - (b) Blood tests of cows and bulls over 30 months of age consigned to market for breeding, feeding, slaughter or other purposes, whether of dairy or beef breeds. The number of animals tested each year must be at least 5 percent of the animals over 3 years of age in the herd (25 percent over a 5-year period or 30 percent over a 6-year period).
 - (c) A blood test of a sample group of the breeding cows over 3 years of age, the sample to contain enough animals to provide a 95 percent probability of finding brucellosis, if present, at the 2 percent level of disease incidence among the animals

tested. (See Graph CA 4-4, page 24) The blood test is to be conducted within 18 months prior to the termination of the certification period.

(d) A complete herd blood test conducted with 18 months prior to the termination of the certification period.

2. All brucellosis milk ring test suspicious herds have been blood tested.
3. All herds included in 1 (b) or (c) in which it has been established that brucellosis exists are blood tested.
4. The number of herds found infected during the entire certification period does not exceed one percent of the area herd population, or 1 herd, whichever is greater.
5. Herds in which brucellosis has been found have been retested and legally released from quarantine, and, in addition, have been retested not less than 3 months following removal of the last reactors or be a herd included under 1 (a) or (b) of paragraph B, this Section.
6. All suspects to the blood serum test shall:
 - (a) have been retested negative,
 - (b) have had at least 2 retests not less than 30 days apart in which it has been established that the blood serum titers are stabilized or receding,
 - (c) be a part of a herd included under 1 (a) or (b) of paragraph B, this Section, or
 - (d) if the suspects have been consigned to slaughter and are not available for retest, the herd shall be retested or be included under 1 (a) or (b) of paragraph B, this Section.

7. If any reactors are disclosed in Certified Brucellosis-Free Areas, they are to be consigned to slaughter. If they are to be marketed within a Certified Brucellosis-Free Area, they should be transported directly to the holding pens of a slaughtering establishment. In any event, they are not to be unloaded onto premises or into facilities within a Certified Brucellosis-Free Area, which are utilized for holding or handling livestock for any other purpose than consignment for slaughter. Vehicles used for transporting reactors must be cleaned and disinfected under the supervision of a Federal or State inspector or an accredited veterinarian before again being used for transporting any other livestock.
8. All herds of other species of domestic livestock in which brucellosis is suspected or found shall be placed under quarantine and retested until negative or be eliminated.

C. If the percentage of infected herds exceeds the percentages set forth in B 4, the area shall revert to Modified Certified Brucellosis Area status and must requalify in accordance with Section I of PART V.

Section III. Additions to Certified Brucellosis-Free Areas

A. To enter a Certified Brucellosis-Free Area, cattle (except steers, spayed heifers, calves under 8 months of age, and those maintained under Paragraph 11, Section I) must be from one of the following:

1. Certified Brucellosis-Free Herd.
2. Certified Brucellosis-Free Area.
3. Herd not under quarantine in a Modified Certified Brucellosis Area, and the individual animals blood tested negative within 30 days prior to entering the area. The 30-day test is not required if the herd is actively participating in a screen test procedure.

4. Herd not under quarantine in a Modified Certified Brucellosis Area, and be an official vaccinate under 30 months of age.

B. Animals not qualifying under paragraph A may enter a Certified Brucellosis-Free Area provided they have been held in isolation on premises not known to be infected with brucellosis, and have, while in isolation, passed two negative blood tests, not less than 30 days apart, the second to be within 30 days of entering the area. Should any reactors be disclosed in a group of cattle held in isolation under this paragraph, none of the animals in the group will be eligible for entry into a Certified Brucellosis-Free Area, regardless of individual animal tests.

C. All animals entering a Certified Brucellosis-Free Area, other than steers, spayed heifers, and adult cattle destined for dry lot feeding premises, should be transported in conveyances which have been cleaned and disinfected under the supervision of a Federal or State inspector or an accredited veterinarian since last used for hauling livestock. Further, they should not be transported on the same conveyance with adult cattle of unknown brucellosis status.

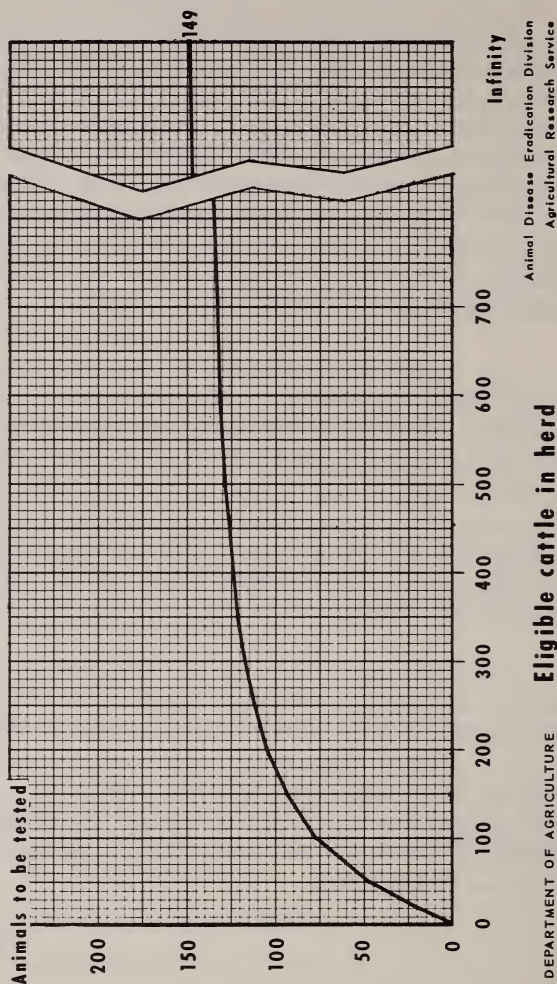
D. Animals not known to be infected with Brucella, and those known to be reactors may be consigned to slaughter at establishments within a Certified Brucellosis-Free Area provided they are transported directly to holding pens at the slaughter establishment and are not unloaded onto premises or into facilities utilized for holding or handling livestock for any other purpose than consignment for slaughter.

BRUCELLOSIS ERADICATION

CA 4-4 October 1959

Number of animals that must be tested in order to have a probability of 95% of finding Brucellosis if present in a herd.

Based upon 2 percent incidence of infection in the herd.



U. S. DEPARTMENT OF AGRICULTURE

Animal Disease Eradication Division
Agricultural Research Service

CHAPTER II

PORCINE BRUCELLOSIS ERADICATION

UNIFORM METHODS AND RULES

The following procedures are designed, primarily, for establishing and maintaining Validated Brucellosis-Free Herds, but may also be used for establishing Validated Brucellosis-Free Areas at the discretion of cooperating State and Federal officials.

A. Validation of Swine Herds as Brucellosis-Free

Validation is made on the basis of two consecutive negative tests on the entire breeding herd 30-90 days apart. This includes all breeding animals 6 months of age and over. This validation holds for 12 months. Revalidation is made annually by the passing of a single negative test on the entire herd.

B. Plans for Eradication in Infected Herds

Plan 1. This plan is recommended for commercial herds.

1. Market the entire herd of swine for slaughter as soon as practicable.
2. Clean and disinfect houses and equipment.
3. Replace with stock from validated brucellosis-free herds, placing them on clean ground (free of swine for at least 60 days).
4. Following two consecutive negative tests 30-90 days apart, the herd is eligible for validation.

Plan 2. This plan is recommended for use in purebred herds where it is desirable to retain valuable blood lines.

1. Separate pigs from sows at 42 days of age or younger and isolate.
2. Market infected herd for slaughter as soon as practicable. If sows are held for later litters, complete isolation is essential.
3. Test the gilts to be used for the following breeding season about 30 days before breeding. Save only those gilts that are negative. Breed only to negative boars.
4. Retest the gilts after farrowing and before removing them from individual farrowing pens. Should reactors be found, they should be segregated from the remainder of the herd. Select only pigs from negative sows for breeding gilts.
5. If herd is not negative at this time, the process is repeated. When the entire herd passes two consecutive negative tests not less than 90 days apart, it becomes eligible for validation.

Plan 3. This plan is not recommended in general but has been found useful in herds where only a few reactors are found and where no clinical symptoms of brucellosis have been noted.

1. Remove reactors from farm.
2. Retest herd at 30-day intervals, removing reactors, until entire herd is negative.
3. Two negative tests, not less than 90 days apart, qualify the herd for validation.
4. If the herd is not readily freed of infection, abandon this plan in favor of Plan 1 or Plan 2.

C. Accessory Regulations

1. Blood samples are to be taken by approved accredited veterinarians.
2. Reactors must be sold for immediate slaughter.
3. Replacement swine may be added without test, if procured directly from a validated brucellosis-free herd.
4. All other replacement breeding animals shall have passed a negative agglutination test and be held in isolation until passing a second negative agglutination test. The second test shall be at least 30 days after the first, in the case of boars and open gilts, or after farrowing in the case of bred sows and gilts.
5. All swine on the farm kept for feeding purposes shall be segregated from the breeding herd until moved for slaughter.
6. Tests of herds and animals are to be interpreted in accordance with ADE Division Memorandum 504.23.

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Bartz, Jerry Allen

Investigations on the differences in the sensitivity of four plant pathogenic fungi to n-dodecylguanidine acetate, (dodine). (Univ. of Wisconsin, 1969). Xerox copy. Order no. 69-9665

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Prepared by

Animal Disease Eradication Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.



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